

(12) UK Patent Application (19) GB (21) 2 210 836 A

(43) Date of A publication 21.06.1989

(21) Application No 8823337.4

(22) Date of filing 05.10.1988

(30) Priority data

(31) 3734393

(32) 10.10.1987

(33) DE

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(51) INT. CL.

B60R 1/04 1/12

(52) UK CL. (Edition J)

B7J 1/69

(56) Documents cited

GB 2204544 A

GB 1556816 A

GB 1472978 A

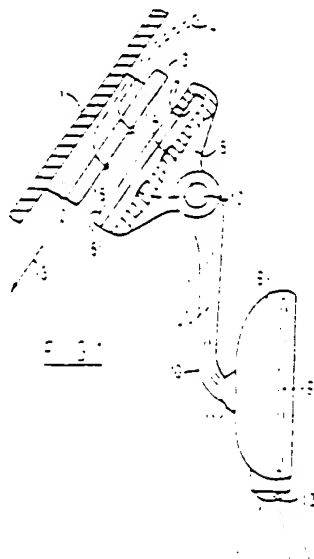
(58) Field of search

UK CL. (Edition J) B7J

INT. CL. B60R 1/00

(54) A rear-view mirror for motor vehicles

(57) A rear-view mirror comprises an anchoring means 2 and a part 5, 8, 10 which includes the mirror body 9. In order to obtain electrical contact between the component parts, the anchoring means 2 and the part 5, 8, 10 are provided, at locations facing one another, with electrical contacts 14, 15 such that a contact closure is achieved as a result of the part 5, 8, 10 being slipped or pressed in position. Electrical supply is therefore automatically established for a lamp 13, for example.



At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy

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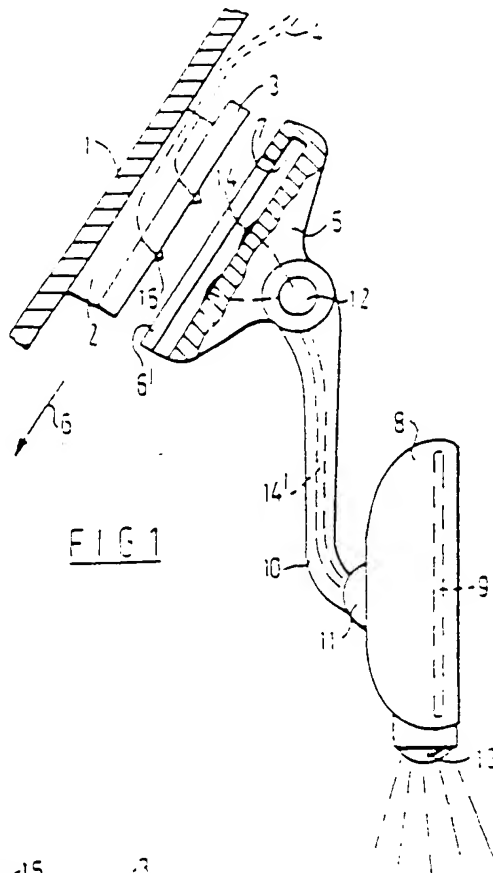


FIG 1

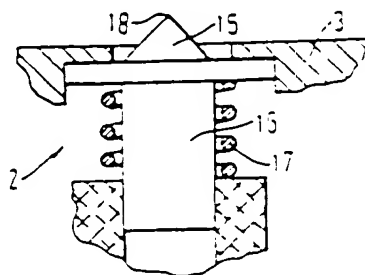


FIG 2

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A rear-view mirror for motor vehicles

5 The invention relates to a rear-view mirror for
motor vehicles, but more especially an interior
mirror, having a part which includes the mirror body
and an anchoring means which is securely mounted on
the vehicle, the part of the mirror which includes the
10 mirror body being connectable to the anchoring means
by being slipped or pressed thereon, and the mirror
is provided with an electrical connection, e.g. for
operating a light situated on the front, free portion
of the mirror.

15 In known mirrors of this type, when the front part
is being attached to or mounted on the anchoring means,
the electrical connection has to be established by
specific arrangements, their own contact elements being
20 provided for this purpose and having to be actuated.

 The invention seeks to assemble the above mirrors
in such a manner that the electrical connection of the
mirror is readily achieved, that is to say without
25 special manipulations or the like, when the front
part of the mirror is slipped or pressed onto the
anchoring means.

 To achieve this object according to the invention,
30 the anchoring means and the part which includes the
mirror body are provided, at locations facing one another,
with electrical contacts such that a contact closure
is achieved as a result of said part being slipped
or pressed in position. In such a case, these
35 contacts are advantageously so adapted that, of two
associated contacts, at least one is mounted in an

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elastically resilient manner in order, on the one hand, to permit said component parts to be pressed or slipped in position and, on the other hand, however, to achieve a reliable contact.

5 A mirror which is so adapted is advantageous, in that it can be assembled or dismantled irrespective of the electrical connections, and these operations can also be carried out without the need for care and tools.

10 It also lies within the scope of the invention to provide a plurality of contact pairs, especially more than two contact pairs, so that many electrical leads can readily be connected accordingly.

15 Normally said contacts are provided on the anchoring means, on the one hand, and on an arm or support for the mirror housing, on the other hand, the contacts being incorporated in these component parts, that is to say they do not protrude therefrom, but
20 they should be disposed as flat and flush as possible.

The present invention will be further illustrated, by way of example, with reference to the accompanying
25 drawings, in which:

Fig. 1 is a side elevational view of an interior rear-view mirror for passenger cars - the base being shown in partial section; and

30 Fig. 2 is a partial sectional view through the anchoring means for the mirror of Fig. 1.

A substantially plate-shaped anchoring means 2
35 is secured to the inside of the front windscreen 1

of the vehicle by means of glueing or the like.

The anchoring means 2 has an edge 3, which protrudes upwardly and laterally, as well as connection wires 4 which extend to the source of current of the vehicle.

5 A mirror base 5 may be slipped onto the anchoring means 2 in the direction of arrow 6. In order to achieve a reliable, form-fitting connection, the base 5 has a recess 6' with an undercut portion 7 which corresponds to the configuration of the edge 3. If the base 5 is slipped in position, a positive - yet detachable - connection results between the base 5 and the anchoring means 2.

15 The arm 10, which supports the mirror housing 8 with the mirror body 9 situated therein, engages with the mirror housing 8 via a ball joint 11, and is connected to the base 5 via a pivot joint 12.

20 A light 13, the bulb of which has to be supplied with current, is situated at the lower end of the mirror housing 8. The electrical supply leads 14' extend into the mirror housing 8, the arm 10 and the base 5. They are connected there to two contacts 14 which are situated on the bottom of the recess 6.

25 Contacts 15 are provided above the contacts 14 and are associated therewith on the anchoring means 2. If the base 5 is slipped in position and the mirror is in its operative position, the contacts 14 and 15 are in contact with each other so as to permit the light 13 to operate.

30 Accordingly, the current connection is ensured via the contacts 14 and 15 when the mirror is assembled. The supply of current is interrupted when the base 5 is removed from the anchoring means 2. These connections are established, or interrupted, without necessitating the introduction of additional measures.

It is important that the contact closure is positively effected and is maintained even if vibrations or sudden jolts occur. For this purpose, as shown in Fig. 2, the actual contact 15 is attached to the front, free end of a push-rod 16 which can travel rearwardly in an axial direction in opposition to the action of a compression spring 17. When the base 5 is slipped in position, the contacts 15 are pressed slightly inwardly; and, after the assembly operation has been effected, the compression spring 17 ensures an internal contact closure of the two contact pairs with the contacts 14 and 15. In such a case, the contact 15 which extends in a point 18 is also particularly advantageous.

The elastically resilient mounting of the contacts 15, and possibly also 14, may also be achieved accordingly by means of a leaf spring, which would have to be provided with the contact element on the free end or the like.

The resilient nature of the contacts also presents the considerable advantage that a frictional connection is created between the anchoring means 2 and the base 5. The connection is, in consequence, additionally ensured.

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CLAIMS

1. A rear-view mirror for motor vehicles, more especially an interior mirror, having a part which includes the mirror body and an anchoring means which is securely attached to the vehicle, the part of the mirror which includes the mirror body being connectable to the anchoring means by being slipped or pressed thereon, the mirror being provided with an electrical connection, which extends to the part including the mirror body, in which the anchoring means and the part including the mirror body are provided, at locations facing one another, with electrical contacts such that a contact closure is achieved as a result of the part including the mirror body being slipped or pressed in position.

2. A mirror as claimed in claim 1, in which three or more contacts are provided.

3. A mirror as claimed in claim 1, in which the contacts or at least one contact of a pair, are adapted to be elastically resilient, so that the contact closure is effected in opposition to the restoring force of the contacts (spring force) when the component parts are pressed or slipped in position.

4. A mirror as claimed in claims 1 and 3, in which the restoring forces for attaining or increasing a frictional connection between the part and the anchoring means are measured.

5. A mirror as claimed in claim 3, in which at least one contact extends to the free end in a pointed, e.g. conical manner.

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6. A mirror as claimed in claim 3, in which the elastically resilient contacts are situated on the anchoring means.

5 7. A mirror as claimed in claim 1, in which a light situated on the lower edge of the mirror housing, is supplied with current via the contacts.

10 8. A mirror as claimed in claim 3, in which a contact is situated on the free end of a spring-loaded push-rod or on a leaf spring.

15 9. A rear-view mirror for motor vehicles, substantially as hereinbefore described with reference to the accompanying drawings.

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